

**REMARKS**

Claims 30-32, 34, 36, 54, 55 and 57-59 are all the claims pending in the application.

The Examiner rejected claims 30, 54, and 57-59 as being anticipated by Mears.

Applicant appreciates the Examiner's identification of allowable subject matter in claims 31, 32, 34, 36, and 55. Rewriting of these allowable claims into independent form is held in abeyance at this time, inasmuch as applicant submits that claims 30, 54, and 57-59 are patentable in their present form. The rejection under 35 U.S.C. § 102 is accordingly respectfully traversed.

Mears does not relate to the claimed subject matter. Specifically, Mears fails to teach stabilizing the repetition rate of a fiber laser by controlling the temperature of the fiber, or stabilizing the repetition rate of a fiber laser through use of a temperature controlled enclosure as claimed in independent claims 30, 54 and 57.

The Examiner points to the disclosure in Mears at column 2, lines 58 - 59 as teaching an enclosure for a fiber laser, and concludes that there is no temperature variation in this enclosure. Applicants strongly refute this interpretation of Mears. The entire paragraph from which the Examiner has taken this alleged "teaching" reads as follows:

Although impliedly, at the lowest dopant concentrations lasers and amplifiers, as considered herein, incorporate fibres of a relatively long length, e.g. 5 cm and greater up to at least 300 m, (the length of the fibre serves as a cladding mode filter and gain is distributed), compact devices can be produced. A coiled 1 m length fibre laser can be readily fitted into a 1 cm<sup>3</sup> enclosure.

This description in Mears is not disclosing or suggesting an actual enclosure for a fiber laser. Rather, it is apparent from context that the writer was simply using a figure of speech, as a way of conveying to the reader a sense of the scale or size of a certain length of fiber. The statement regarding an "enclosure" was clearly made only to support the point made in the previous sentence, which stated that devices incorporating such fibers can be made compact. It

is analogous to saying that a thing “will fit in the palm of your hand”, or “is smaller than a breadbox”. In the same way, these phrases do not actually imply an actual hand, or an actual breadbox..

Regarding the actual disclosure of Mears, there is no mention of any enclosure whatsoever. Further Mears expressly rejects the need for temperature control at all. See the following disclosure from column 2, lines 30 - 39:

Single-mode fibre lasers and amplifiers, as considered herein, possess a number of advantages over their bulk counterparts. By virtue of their small cores (typically 8  $\mu\text{m}$  diameter and less), very-low thresholds (.about.100  $\mu\text{W}$ ) and high gains can be achieved. Also since typically fibre diameters overall are about 100  $\mu\text{m}$  , thermal effects prove to be minimal. The fibre laser can therefore be easily operated CW without auxiliary cooling, unlike previous neodymium-doped glass lasers

Moreover, Mears is completely silent regarding repetition rate and temperature stabilization of the same, as disclosed and claimed by applicant.

Therefore, claims 30, 54, and 57 are not anticipated. Claims 58-59, by their dependency, are also not anticipated. Applicant requests the rejection be withdrawn.

Furthermore, as Mears teaches avoidance of cooling or any other form of temperature control for fiber lasers of this type, and fails to teach, suggest , or even hint at stabilizing a repetition rate of a fiber laser as claimed by applicant, it is likewise apparent that Mears does not render applicant’s claims obvious, either alone or in combination with other references of record.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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